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ABSTRACT

The television industry is characterized by numerous imperfections in market competition. The spectrum allocation policy of the Federal Communications Commission (FCC) assures that there will be only three national television networks; consequently in nearly all markets these stations account for 75% to 100% of revenues. These networks in turn control the most lucrative prime-time outlets for programing, thereby accounting for most of the sales of program producers and for more than half of television advertising sales. The economic and political position of the network is enhanced by the network-owned affiliates located in markets serving more than 20% of the nation's population. The uniqueness of television advertising and the tight oligopoly in television creates increased market concentration in various consumer industries that find television advertising particularly powerful. Competition in time is important in determining viewer satisfaction, the impact of a particular advertising or cultural message, and economic rents demanded by especially popular programs. Possible remedies for imperfect competition include increasing the number of networks, relaxing cable television regulations, limiting networks' access to prime-time programing, and undertaking antitrust action against the three major networks. (DF)

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# TELEVISION AND COMPETITION

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# TELEVISION AND COMPETITION

Roger G. Noll

Television is probably the most profitable industry in the United States. Affiliates of the three major commercial networks earn annual rates of return on tangible capital investment of over 50 percent, and in large cities, profits sometimes exceed 200 percent of tangible investment. VHF television stations in large cities normally sell for several times the book value of their physical assets. Most of the value of a station is "intangible"; indeed a license to operate a VHF station in one of the top ten markets is an intangible asset that is worth several tens of millions of dollars, and usually accounts for most of a station's total assets. Moreover, high rates of profit and prices for television licenses are not a recent, passing pheromenon. For twenty years, television profits have exceeded by a substantial margin the rates of return earned in more competitive sectors of the American economy.

Usually abnormally high profits in an industry attract new firms and greater competition, causing expanded output, lower prices, reduced profits, and greater consumer benefits. In television, the number of stations on the air has increased during the past two decades, but for several reasons new entry has not been an effective force for making the industry much more competitive.

This paper has several purposes. First, it offers an

explanation of why television industry profits are so high. Second, it explores the benefits to viewers, advertisers and producers that increased competition could bring. Third, it outlines some of the ways in which the television industry could be made more competitive, including the potential role of antitrust policy in the industry.

## IMPERFECT COMPETITION AND THE ECONOMICS OF TELEVISION[1]

[1] This section summarizes a well-developed literature on the economics of television. For more detail, see Noll, Peck, and McGowan, Economic Aspects of Television Regulation; Owen, Beebe and Manning, Television Economics; and the references cited in these books.

The three major commerical networks dominate American television. In most of the television markets in the United States, the combined audience share of the three networks exceeds 90 percent. Even in the two largest markets, New York and Los Angeles, in which the networks compete with over a dozen noncommercial and independent commercial stations, the networks normally capture 75 to 80 percent of the audience.

The reasons for the dominance of the commercial networks are to be found in the combined effect of the underlying economics of television and the policies of the Federal Communications Commission towards the industry. The economics of television broadcasting favors the creation of networks. A television network is essentially a vehicle that permits stations to coordinate acquiring, scheduling, and

promoting television programs. This coordination reduces costs and increases revenues in several ways.

Economic Incentives for Networking

The most obvious advantage of a network is that it enables numerous stations to share the production costs of programs. The production costs of a program are the same whether the program is shown in one or 250 markets. Thus, production costs per station are lower if the same program is shown in numerous markets than if each station produced its own programs. This is why almost all television programming is made for a national audience. A local program has to be very inexpensive to produce, yet very popular compared to national alternatives, if its cost per viewer is to be attractive to a television station. With very few exceptions, local news and sports events are just about the only types of local programs that can compete with national programming.

National distribution also affects the choice of the quality of the programs to be broadcast. For any particular piece of programming material, the size of the audience that the program will attract will generally be larger if more is spent in producing the program. However, at some point additional expenses on production will have a diminishing effect on audience size, if for no other reason than that audience ratings can not exceed the number of households that are offered a program. A decisionmaking unit, whether a station or a network, will seek to pick a level of production costs that maximizes the profits from the program. This means that in each market, the last dollar of

production costs for that market would just equal the additional advertising revenues created by that expenditure. Networks will generally pick a higher level of production quality than would a single station undertaking a purely local production. The reason, once again, is found in the cost-sharing feature of national programs. To be worthwhile, a contemplated improvement in the quality of the program need capture less of an audience increase in each market if acquired and broadcast by several stations then would be the case if a single station were paying for and broadcasting the program. Thus, programs produced for a national market are not only less expensive per station, they also tend to be more expensively produced than the same type of local program.

Of course, the advantages of national distribution of programs do not alone explain the dominance of networks. Independent stations acquire most of their programming through the national syndication markets, in which owners of programs sell local broadcasting rights to particular stations. Presumably, all nationally distributed programming could be sold in this manner. But networks can deliver national programming to their affiliates at a lower cost per station than the syndication market can. One reason is that the negotiations over the price of programs are simpler, and less costly, if a single agent, such as a network, represents two hundred or more stations than if each station negotiates separately. Another reason is that networks can solve the complicated problem of scheduling programs for all affiliates, rather than have each attack the scheduling problem separately. The portion of the audience for one program that stays

tuned for the next depends on the characteristics of the two programs. As a result, scheduling to maximize audience size is not a trivial problem, so that stations have an interest in pooling their resources for scheduling programs rather than attempting to do the job themselves. Moreover, if all stations in a network adopt the same schedules, they can also pool their promotional activities, such as by advertising one program during the program that precedes it or by advertising in nationally circulated periodicals the specific time that programs will be shown throughout the country.

None of the preceding reasons for networking is the consequence of market power on behalf of networks in relation to stations, program producers, or advertisers. Instead, they are consequences of the underlying economics of television. But, market power can provide additional incentives for networking. Because three networks account for most the the sales in the television industry, oligopolistic market advantages can arise in dealing with program producers, advertisers, and individual stations.

The program production industry, although it provides several examples of production personnel who earn extraordinarily high incomes, is generally regarded as competitive. Numerous firms succeed in selling programs to networks each year, and profits are sufficient to cause many more firms to offer programs for sale -- usually in the form of pilots -- than can be scheduled. Moreover, the cost of programming does not appear to depend much on the amount of programming being produced -- that is, supply is elastic and diseconomies of scale apparently are not present. These conditions normally would not

produce much of an advantage to a buyer in forming a monopsonized market for the industry's product, for any attempt to use market power to lower the costs of programs generally would simply force firms to exit from the industry.

Nevertheless, market power can be useful in one respect. Very popular television programs generate abnormally high revenues, yet they cannot effectively be duplicated. In a competitive market, the talent involved in producing a highly successful program would be rewarded by especially high incomes as competition by broadcasters for popular programs drove their prices up to a cost-per-viewer that was equal to that of programs of average attractiveness. In an imperfectly competitive market for programs on the buyers' side, some check exists on the ability of the owners of popular programs to capture all of the benefits from their popularity. If networks are less than vigorous in bidding away popular programs from their rivals, the price of popular programs is not likely to rise enough to strip away the excess revenues that are derived from their popularity. Thus, a popular program such as "All in the Family" may capture an audience that is twice as large as the programs with which it competes. In a competitive market, an episode of this program would be priced at double the cost of the competition.

Networks and Advertisers

Imperfect competition in television can also affect advertisers, but only to the extent that television advertising is unique among the media. National advertisers typically advertise in several media, and

if all media were perfect substitutes for each other concentration in the television industry would not give broadcasters the ability to set uncompetitive prices. To the extent that television does provide a unique advertising product, an oligopolistic market structure will confer upon broadcasters the ability to set prices above competitive levels without driving advertisers to other media. Moreover, to the extent that television does have a unique effect upon consumers, it is even possible for the oligopoly in television to create an oligopoly in an otherwise competitive industry that finds television advertising especially productive.

National advertising on television, because it reaches a very large proportion of the population, has a very high minimum cost to advertisers. And because networks charge somewhat lower advertising rates than the sum of the rates of their affiliates, the cheapest advertising on a cost-per-viewer basis is the most expensive on a total cost basis. Moreover, advertising appears to exhibit a kind of economy of scale. Repeating the same commercial several times not only lowers the production costs per minute of time purchased, it also seems to increase sales more than in proportion to the number of times the commercial was broadcast. Thus, television advertising can create both an absolute cost barrier (a high fixed cost) and economies of scale in an industry that otherwise exhibits constant returns to scale in its production activities. This reduces the likelihood that the industry will exhibit a competitive market structure.

The problem is exacerbated if one particular type of unduplicatable programming is the source of television's unique status

as an advertising medium. Televised sports may well be such a case.[1]

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[1] For several examples of the relationship between sports broadcasting and creation of oligopolies in consumer industries, see Ira Horowitz, "Sports Broadcasting," in Noll, Government and the Sport's Business, Brookings (1974).

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Each professional sport in the United States is now controlled by a single bargaining agent, a state of affairs made possible by an antitrust exemption granted by Congress to professional sports in 1962. In each sport, the Commissioner negotiates national broadcasting rights with the networks. The result is monopoly returns to sports enterprises. After the antitrust exemption was granted, the number of broadcasts fell but revenues from sales of broadcasting rights increased by severalfold in football and baseball, the sports with the greatest appeal to television viewers. Thus, the result of the Sports Broadcasting Act was a limitation to the extent to which sports telecasts would respond to increased demand for advertising of events in these sports. In sports, then, oligopoly in broadcasting and monopoly in sports combine to produce a limited amount of very expensive advertising of sports events, which in turn can be afforded only by a few firms.

Arguments much like the preceding ones have been put forth to explain concentrated markets in several consumer goods industries. Cosmetics, beer, petroleum products, various household goods and some foods are prominently mentioned examples. Beer is an especially fruitful case study. Its primary advertising interest is sports,

especially televised events of local teams. When a new team comes to a city, a discrete change takes place in the advertising environment, and Ira Howowitz has documented how this has altered market shares of beer companies according to who sponsors the local team. Moreover, as nationally televised events have become more important, so, too, have national beer companies supplanted local ones. Both effects have made beer a much more concentrated industry than it was twenty years ago.

Relations with Affiliates

The relationships between affiliates and networks are complex, with the distribution of bargaining power varying considerably from market to market. The determining factor is the number and technical nature of television channels allocated to a market. For a variety of technical reasons deriving from the superiority of lower frequencies for television broadcasting, viewers prefer to watch VHF stations in comparison with UHF stations. As a result, networks seek to affiliate with VHF stations in order to maximize their audiences. Thus, if the number of VHF stations is one or two, networks will compete to affiliate with the best available stations. Alternatively, in markets with more than three VHF commercial assignments, the networks hold a favorable position as stations compete to affiliate.

Because the Federal Communications Commission has assigned television stations partly in relation to the size of the market served, stations with better bargaining power tend to be located in smaller markets. A few large markets have more commercial VHF stations than

there are networks, and a few small markets have fewer than three stations. But in about 70 percent of the nation's hundred largest markets, there are exactly three VHF stations. In most markets the bargaining power of networks and stations is roughly equally balanced or favors the stations, although the relatively small number of cities in which it favors the network are very populous and therefore very important economically.

The affiliation agreements between networks and stations are not completely known, so that the extent of price discimination by networks in the treatment of affiliates is uncertain. Contracts between networks and stations are filed at the FCC, but they provide incomplete information for purposes of detailed empirical analysis. In general, stations are rewarded by the networks in two ways. Stations receive a share of the national advertising revenues that are collected by the networks, with the share being negotiated separately with each affiliate but based upon the "card rates," or published, undiscounted advertising rates charged by the affiliate for advertising that it sells. In addition, networks include some "dead time" during the network schedule that affiliates can sell to advertisers in either the local or national advertising market. Because stations in small markets tend to face less competition than stations in large markets, their advertising rates tend to be somewhat higher on a cost-per-viewer basis than are the rates for stations in large cities. Consequently, the "dead time" tends to reward small city stations a little more handsomely than big city stations. But this is a consequence of the amount of competition in the advertising market, not of the relative

bargaining positions of networks and stations. In any case, this may be offset by the sharing arrangements for advertising revenues, or by differences in discounting practices among stations. Moreover, stations in small cities are generally less profitable than big city stations. In small cities, somewhat higher revenues per viewer are more than offset by higher costs per viewer which arise from the substantial fixed costs of a television station.

Affiliation agreements indirectly affect the program production industry by erecting barriers to a station that might seek to substitute some other source of programs for a particular network offering. First, affiliates are required to carry (or "clear") a minimum amount of network programs. Second, the formula for reimbursing the affiliate provides an incentive for clearing a large proportion of the network's programs in that the sharing of national advertising revenue with the affiliate begins only after some minimum amount of programming has been accepted. Thus, an affiliate tends to receive less than 20 percent of the revenue generated by a program for the first 21 to 24 hours of network programming per month (depending on the network), but over 40 percent for programs in excess of this number. Because a station would clear the most successful programs first, the formula provides a special incentive to clear weaker programs, for by so doing the station gains a larger proportion of the revenues generated by the best programs as well as the rewards for the weaker program that is the last to be cleared. This means that a program offered by a source other than a network must be significantly more popular than the program it replaces if it is to be purchased by affiliates.

Although networks tend to be the focal point of any analysis of anticompetitive practices in television, their market power is derived from the stations. It is probably not happenstance that the number of commercial networks equals the number of VHF assignments in most of the hundred largest markets. Although the issue is debatable as to how many networks could be supported by commercial advertising, the number of networks that would be economically viable is surely affected by spectrum allocation policies. A fourth network, should one be formed, would face a competitive disadvantage because it could not acquire a VHF affiliate in most of the nation's largest cities. Existing VHF affiliates face no incentive to switch from the certain profitability of the three established networks to the uncertainty of a fourth competitor that, if successful, would serve to divide the advertising market four ways rather than three. Existing VHF independents are not numerous enough to constitute a viable network for programs of a quality comparable to that of the present networks.

Network-Owned Stations

A remaining feature of the structure of the television industry that requires some explaining is the presence of stations that are owned and operated by the networks. The FCC permits networks to own five VHF affiliates. All three commercial networks own the limit, and all of the stations owned by networks are located in the nation's largest cities.

The networks can be expected to find ownership of affiliates attractive for several reasons. Some reasons have to do with efficiency.

For example, if networks bargain especially hard with stations in big markets that have more than three VHF affiliates, one consequence will be that affiliates will find some nonnetwork programming attractive and fail to clear some offerings of the network. In this kind of arrangement, the result can be more revenue for the station but less total revenue for the network and the station. Thus, a merger between the station and the network increases the total profits of both by removing the station's incentive to seek outside programs.

In some cases, there may be economies of scope in combining a network and an affiliate arising from network news activities. In cities that generate a substantial portion of national news, the network must maintain a news crew that could also be used to supply material for local newscasts. The extent to which this is important, however, is subject to some question. The hypothesis would seem to be confirmed by the ownership of affiliates by all three networks in New York, but would seem to be contradicted by the fact that only one network owns an affiliate in Washington D.C., whereas Cleveland, San Francisco, St. Louis, and Detroit have network-owned affilates yet are relatively unimportant sources of national news compared to Washington.

Ownership of affiliates guarantees that a network will capture the carryover benefits of its own popular programs. A given program will usually capture a larger audience on a network affiliate than it would on an independent station because the affiliate is likely to precede the program with material that is more popular than the offering of the independent. If an affiliate fails to clear a network program, it still derives the carryover benefit of the preceding network

program, but does not have to compensate the network for it. By owning the affiliate, the network can make certain that it will retain the benefits of carryover.

These rationales for ownership of affiliates are based on real economies of vertical integration. There may be other benefits as well. First, network-owned affiliates tend to be located in the largest markets. Indeed, all three networks own affiliates in the three largest cities -- New York, Los Angeles and Chicago -- and more than 20 percent of the population lives in the markets served by each network's owned affiliates. Thus, ownership of these stations contributes substantially to the proportion of the television advertising market accounted for by the networks. Indeed, the three networks and the stations that they own account for more than half of the revenue of the television industry. Television is not among the most concentrated industries, such as automobiles, aluminum, tobacco, or copper. Nevertheless, in relatively few industries do three firms account for over half the sales. The proportion of the market accounted for by the three largest firms is greater in television than in such industries as steel, farm machinery, and electric motors and generators, all of which are generally regarded as imperfectly competitive. Ownership of five affiliates in major markets, by adding more than fifteen percentage points to the sales accounted for by the networks, moves television into this oligopolistic company. Whether the market shares of television networks are sufficient to give them market power in the sale of advertising remains an open question that has not received much attention. Because each market has so few stations, excess profits are certain to

arise in all but the smallest cities. Thus, it is a difficult and as yet unattempted task to sort out how much, if any, of the noncompetitive returns in the industry are due to the dominance of the three networks.

A second aspect of ownership of affiliates has to do with the possible political benefits of ownership. Twenty percent of Congress and the vote for President, as well as of advertising revenues, is accounted for by the areas served by network-owned television stations. Thus, the electoral fortunes of a substantial number of political leaders depends in part on the kind of news coverage they receive from network-owned stations. Whether this state of affairs affects the attitudes of politicians remains to be demonstrated, but the potential is there for the networks, through owned affiliates in the largest cities, to inflict political damage on, say, a President contemplating a more competitive broadcast policy in a Presidential election year.

Finally, ownership of affiliates in large markets makes it somewhat more difficult for nonnetwork programming to gain a foothold. Network affiliates generally transmit most network programs; however, they typically offer a few local or syndicated prime-time programs despite the strong incentives in the revenue-sharing agreements to clear the network schedule. But network-owned stations virtually never fail to clear the network feed. This means that fifteen VHF stations in the nation's largest cities are essentially excluded from the market for prime time syndicated and local programming. This benefits the networks to the extent that it reduces the quantity and quality of nonnetwork programming that is offered to affiliates in other cities and, at the same time, assures that all network programs will be

seen in the three largest markets, where advertisers are most anxious to reach the audience and where other media that review television are concentrated. The importance of this effect is not necessarily great, for the best nonnetwork programs probably find independent outlets in these markets. Further work needs to be done on the distribution patterns of syndicated programs to determine the magnitude of this effect.

The Many Faces of Market Imperfections

The television industry is characterized by numerous market imperfections, as outlined above. The best programs cannot successfully be copied, and so the talent associated with them captures scarcity rents that cause television performers to earn extremely handsome incomes. FCC spectrum allocation policy assures that there will be only three national television networks, and so in nearly all markets three commercial stations account for 75 to 100 percent of the revenues earned in the market. The three networks, in turn, control the most lucrative prime-time outlets for programming, and therefore account for most of the sales of program producers and for over half of television advertising sales. The position of the network, both economically and politically, is enhanced by the network-owned affiliates which are located in markets that account for over 20 percent of the nation's population. And finally, the uniqueness of television advertising and the tight oligopoly in television creates increased market concentration in various consumer industries that find television advertising particularly powerful.

The question remains whether all this really matters to the

consumer. After all, as argued above, the economics of programming produces a situation in which a larger potential audience produces greater incentives for more expensive programs. Would network news bureaus be as large and laden with as many talented reporters if the potential audience of news programs were reduced by an increased number of networks?

## THE EFFECTS OF MORE COMPETITION IN TELEVISION

The relationship between television and its viewers is a complex one, and involves more than the standard economic issues which arise in debates about antitrust policies. It is widely believed that television is a major force in affecting American culture and politics, that it has had a major effect on what Americans generally regard to be the "good life" or an attractive political leader. For example, the orientation of Americans towards youthfulness and physical fitness, and perhaps neglectfulness of the elderly and materialistic self-centeredness, have all been alleged to be accentuated, if not created, by the glorification of physical beauty in television programs and advertising.

Economic science has little to say about these issues, for economists generally do not explore the effects of the social environment on a person's tastes and values. Thus, this paper does not address these cosmic issues, except to note one obvious relationship between competition and the social impact of television. To the extent that viewers have more choice in television, and spread themselves more thinly among competing channels, the influence of any single voice will thereby be diminished. In the political sphere, for example, editorial positions of

a single station, whether explicit or implicit in the tone of its reporting, will have less of an effect on the electorate if the station must share the population in its market with a larger number of effective competitors. Yet competition will not change the importance of television to a politician, for spreading the audience among more stations still leaves a situation in which most people depend primarily on television as the medium for providing information about public affairs.

The most obvious effect of a more competitive television industry would be with respect to the other industries that transact business with it. A more fragmented audience means more advertising outlets, each with lower prices for advertising. Because advertising is based upon the number of viewers captured by a program, more networks means fewer viewers per network program and, consequently, lower advertising prices, even if network advertising rates are now competitive. And, given the high rates of profit in television, more competition is also likely to cause a reduction in advertising costs per viewer as well.

The consequence of the effects of competition on advertising prices would be to reduce barriers to entry and economies of scale in the consumer goods industries that find television advertising especially powerful. To the extent that a more competitive television industry would make the industries that are heavy advertisers more competitive, consumers would benefit. In any case, lower advertising costs per viewer in a more competitive television industry would to some extent be passed on to consumers. Even if the markets for advertised products were not more competitive, profit maximization requires that even monopolists respond to lower costs by reducing prices.

Competition and Programming

Because television stations do not sell programs to viewers, the issue in discussing the direct effects on consumers of competition in the industry is not the traditional one of monopoly pricing. Rather, the issue is the effect on the consumer satisfaction that is generated by television, which turns on the effects of market structure on the nature and quality of the industry's product.

An increase in the number of television stations can improve the welfare of viewers in two ways: a wider variety of program types may be offered, and within each type the viewer can select from among more competitors. The former is called an increase in the diversity of programs, while the latter is called an increase in viewing options. In general, one can expect an increase in both diversity and options as a result of an increase in the number of stations.

The value of increased diversity is widely discussed and generally recognized, especially among people who are not particularly fond of commercial television as it is now produced. The argument is that numerous types of programming that are not now offered on television to any appreciable extent would be viewed by large numbers of people if they were broadcast, but not by enough to provide networks with an economic incentive to produce them rather than the conventional fare. More competition, so goes the story, might change things.

The argument has been formalized in a clever, illuminating way by Peter Steiner.[1] Suppose that there are three types of

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[1] Peter O. Steiner, "Program Patterns and Preferences, and the

Workability of Competition in Radio Broadcasting," Quarterly Journal of Economics 66 (May 1952):194-223.

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consumers: 155 who will watch only "mass entertainment" like that currently offered by the commercial networks; 80 who will watch specialty program A if it is offered but, if A is not offered, 50 of whom will watch the mass entertainment program; and 70 whose tastes run to specialty B, but 45 or whom will watch mass programming if B is not available. Also, those favoring A do not like B, and vice versa. Finally, suppose that all three programs cost the same to produce, so that networks will seek to pick a programming strategy to maximize the size of the audience.

Obviously, if there is only one network, it will opt for mass entertainment, thereby capturing an audience of 155 Philistines, 50 A-lovers, and 45 B-fanciers, for a total of 250 viewers. A second network will choose to duplicate the mass programming of the first, for then it can expect half the total audience for mass entertainment -- or 125 viewers per station -- whereas the best available specialty program will net only 80 viewers. Even if a third network emerges, it will still duplicate mass programming, getting one-third of the mass audience (or 83 viewers). But a fourth network would not duplicate, because program A produces a bigger audience than could be obtained by capturing one-fourth of the mass audience (80 for A versus 63 for conventional fare). Moreover when the fourth network offers A, the total audience for mass entertainment falls to 200, or less than 70 per station. This will cause another network to switch from mass entertainment to B, leaving only two mass entertainment networks.

The preceding example does not necessarily characterize the state of affairs in television. Indeed, it was carefully selected to produce homogeneity in programming with three networks, but heterogeneity with four. But it does make an essential point: that the diversity of television programming could be affected by competition.

The model also can be used to demonstrate yet another interesting feature of television. To the extent that the model accurately mirrors reality, a monopolist would offer a more diverse schedule if allowed to operate all channels than would result if the channels were separate competitive entities.

If a monopolist were contemplating how to program a second channel, no further gains would be perceived from duplicating mass entertainment -- the same 250 viewers would still tune in, but costs would double. But program A might be attractive to the monopolist, for it would add thirty viewers to the system. Whereas fifty A-lovers would watch the mass entertainment program, all eighty would tune in to A. Thus, the monopolist would offer A if the advertising revenues from thirty viewers were sufficient to offset the costs of producing A; otherwise the second channel would not be operated. A similar argument produces the result that a monopolist will operate a third channel that offers B if the revenues from an audience of 25 (the net gain from offering B) cover its costs, but will otherwise keep the third channel dark.

The preceding example does not demonstrate that monopoly is superior to competition as a structure for the television industry.

First, monopolists will diversify programming only if the net

gain from a new program type offsets its costs, whereas a competitive network will make decisions based upon its total audience. Thus, examples can be constructed in which a monopolist would only operate on one channel, whereas a competitive industry, assuming no channel scarcity, would be extremely large and diverse. Without further information about the intensity of viewer preferences for specialty programs, no conclusion can be reached whether more or less diversity (and hence more or less competition) is desirable.

Second, viewers of the mass audience programs may not be indifferent between one versus two simultaneous programs of the same type. To the extent that the Philistines have preferences for different forms of mass entertainment, a second mass entertainment option could be more valuable to all viewers taken together than the first offering of either A or B. In short, the Steiner model -- and the television industry generally, which the model seeks to depict -- is concerned with head counts of viewers, not with the amount of satisfaction viewers derive from different programs. Consequently, judgments about the consumer benefits of alternative market structures that are derived from measures of program diversity and options must be tenuous. Whereas consumers surely would prefer more television, it is not clear that greater diversity is preferable to more options, or that either would be chosen if consumers, rather than advertisers, paid directly for the additional programming.

Evidence on Viewer Tastes

Whether greater competition will lead to more diversity or

merely more options remains an open question. Other media seem to demonstrate the Steiner model. Increased radio competition after World War II has led to a variety of radio formats; however, the period has also seen the virtual elimination of full schedule networking and expensive national programming. While audience fragmentation may have had some effect on program quality, a more likely cause is that television supplanted radio as the primary means for the more expensive forms of mass entertainment. Similarly, wide spectrum periodicals seeking a mass audience have declined in numbers -- whether large metropolitan daily newspapers or national feature magazines -- but this has been more than offset by the rise of specialty publications, such as suburban newspapers and special purpose magazines.

The fragmentary evidence directly from television seems to point in two ways. Both more options and greater diversity appear to be valued by viewers.

Several pieces of evidence support the view that more conventional options are valued. First, as the number of television stations in an area grows, so, too, does the total audience, at least for the first few additions to the system. The literature is in some disagreement about the magnitude of the effect, but the estimates of the effect of a second network indicate an increase in viewing in the range of a few to fifteen percent. Second, in areas in which some form of pay television has been offered, the most successful programming has been movies and sports, two items that are also big winners on conventional commercial television.

But more diversity may also be valued. Cultural and public

affairs programming, while less popular than mass entertainment, nevertheless draws audiences that are only a few percentage points below average. In the Steiner model, these percentages are assumed to be firm -- that is, they would suffer no erosion if more mass entertainment options were offered in competition with them. If this is true, a fourth network might -- and a sixth network probably would -- opt for specialized programming. For example, the least successful renewed mass entertainment programs capture about 16 percent of the potential audience, while drama, public affairs, and classical music productions normally capture about 10 percent. A fourth network, sharing the mass audience equally, could expect about 12 percent, and a fifth would capture 9.6 percent. Of course, equal sharing is the long-run hope; many years of fierce competition to undo established viewing habits would first have to ensue, just as ABC needed a decade to catch up to NBC and CBS. Perhaps a specialty audience could be captured more rapidly. And perhaps specialty programs could be acquired more cheaply as a new network would not have to compete as vigorously with the established networks for the talent that would produce specialty products.

A three channel monopolist in the current environment would probably either offer more diversity or close down the third channel. The effect of a third network on total viewing is small, with estimates being 2 percent of the audience or less. A profit-maximizing monopolist would not incur the costs of a third network in order to capture a net increase of 2 percent to the total audience. Whether the third channel would be devoted to a different type of programming or would simply not be operated, assuming regulators so permitted, depends on the

cost and audience performance of a specialty network, and these cannot confidently be inferred from existing information.

Advertisers and Program Producers

The effect of more television stations on advertisers and on program producers is somewhat ambiguous. An increase in the number of networks would reduce whatever oligopolistic imperfections networks enjoy that hold up advertising prices and hold down program prices. But more stations also fragment the audience. This undermines the ability of television advertising to create concentrated consumer goods industries. It also reduces the scarcity rents that can be earned by an especially popular program that cannot effectively be duplicated.

Conceivably, more competition in television could make all three producer groups worse off. In each case, however, the cause of the worsening of the position of a producer group would be that more competition allowed a more accurate expression of viewer tastes to be represented in programming. Audience fragmentation is presumably a conscious choice by viewers. A reduction in the scarcity rents of a popular program and the ability of advertisers of that program to charge prices that are not competitive would simply reflect the fact that, with competition, more viewers found the popular program less attractive than at least one alternative.

Both the program and the advertising markets could be made more competitive without having much of an effect on television as seen by viewers. The latter benefit from more options and diversity over the air, whereas advertisers and producers benefit from having a greater

number of networks and stations in the market. The two are not the same. For example, if networks were limited to one night per week of programming and prevented from owning affiliates, both the advertising and the programming industries would face more competitive networks. Yet each night viewers would face three networks, offering probably the same programming that is now available. Alternatively, if a network could operate on only one night, but could on that night manage all three networks, program producers and advertisers would face a more competitive network industry, but viewers would face a series of one-night monopolists who probably would offer at least one less channel of conventional programming and perhaps replace it with a more diverse fare.

The point of these examples is to demonstrate that competition in time is important in determining viewer satisfactions, the impact of a particular message (whether advertising or cultural), and the economic rents created by especially popular programs. But competition in the advertising and programming markets depends upon the number of networks, whether simultaneously operating or not. An increase in the number of networks that operate, but no change in the number of simultaneously operating networks, can reduce the excess profits from imperfect competition that are earned by networks. But because it will not increase either the amount of program material that is broadcast or the number of minutes of advertising that are sold, such a policy will leave untouched the rents of popular programs and imperfectly competitive industries that advertise, and will leave largely unchanged the pattern of programming and amount of viewer satisfactions from television.

## PUBLIC POLICY AND TELEVISION COMPETITION

The major source of imperfect competition in television is government regulation of the industry. Spectrum allocation policies make it unlikely that more than three simultaneously operating national commercial networks will be economically feasible for the foreseeable future. The literature on the economics of television provides numerous examples of ways to increase the number of networks: a few are powerful regional stations rather than relatively weak local ones, "deintermixture" in which all stations in a market are in the same frequency range (all UHF or all VHF), and satellite broadcasting. In addition, cable television regulations could be relaxed so that more viewers would choose the service, creating the possibility of a national network comprised partly of VHF independents and partly of cable subscribers who otherwise would not have access to the new network.

Nonsimultaneous competition could be created by regulatory rules as well. One step along these lines was the prime-time access rule, by which the FCC limited the number of hours per week that could be scheduled by the network. The purpose was to strengthen the syndication market, forcing stations and program producers to deal directly with each other rather than through a network. It was also stated that the FCC hoped that the rule would increase local programming. In any case, the rule generated a large number of relatively inexpensive game shows and some inexpensive local productions with small audiences. It certainly did not do much for competition in prime-time programming.

Antitrust actions potentially could be taken in several areas. One is network-owned affiliates. The case here would depend on a

demonstration that ownership of affiliates gives networks market power in advertising, and makes entry more difficult for syndicated programs.

A second possibility for antitrust action is a case against a consumer goods industry on the grounds that advertising was used to create market imperfections. The case would go beyond the 1960 Federal Trade Commission action that prevented a merger between Clorox and Proctor and Gamble. The argument in that case was that the merged entity would capture discounts in advertising that gave it an unfair competitive advantage.[/] Here the issue is not related to the rate structure, but

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[/] The Clorox case is controversial. See Harlan M. Blake and Jack A. Blum, "Network Television Rate Practices: A Case Study in the Failure of Social Control of Price Discrimination," Yale Law Journal 74 (July 1965): 1339-1401, and John L. Peterman, "The Clorox Case and Television Rate Structures," Journal of Law and Economics 11 (October 1968): 321-422.

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to the entry barriers created by the high costs and possible scale economies of television advertising.

One difficulty with such a case is the problem of relief. Presumably the form of relief would be a limitation on television advertising. Establishing a defensible limit and enforcing it once established are both quite difficult, and could well be beyond the rational limits of antitrust actions even if the case were theoretically and factually sound.

A third course of action is for the antitrust enforcement agencies to support the current mood at the Federal Communications

Commission to introduce more competition in the television industry. The FCC's primary jurisdiction in spectrum allocation, broadcast policy, and cable regulation make it difficult to effect meaningful structural change in the industry without the cooperation of the FCC. Participation by the FTC and the Antitrust Division in ongoing proceedings, such as the current investigations regarding cable television regulations and network policies, could assist the agency in steering a course towards increased competition in the industry.

The key issue to keep in mind when contemplating changes in policy towards broadcasting is that the most important factor influencing the performance of the industry is the allocation of commercial VHF channels. Concentration in the industry, the impact of advertising, the potential political influence of the networks, the high earnings of television talent, and the homogeneity of the product all flow from the way channels have been passed out and subsequently protected against new technologies that might make the industry more competitive. To focus on other, perhaps more easily managed aspects of the industry is to assure that television, as seen by the public, will not be much affected by whatever change in policy might ensue.